# A LETTER

TO

# THE INHABITANTS OF CEYLON,

ON THE

# ADVANTAGES OF

# VACCINATION:

BY

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A REPORT ON SMALL-POX,

AS IT APPEARED IN CEYLON IN 1833-34.

To
The Editor of the
Edinburgh Medical
and Surgical Journal
from the Author

R35884

TO THE

# Inhabitants of Ceylon.

*My good and worthy friends,*

In the performance of my duty as superintendent of vaccination for the western province, I have lately travelled a good deal among you, and have been in the habit of inviting you to meet me, in your more populous towns and villages, for the purpose of explaining to you, through an interpreter, the advantages of vaccination. Within the last eight or nine months, I have had the pleasure of thus meeting and addressing more or less numerous assemblages of you at Calpentyn, Putlam, Chilaw, and Maraville in the Chilaw district; at Negombo, Menooangodde, Doulapitia, Kehelwelle and Gampaha, in the Alootcoor korle; at Jayelle, Slave island, the Colpetty, the Cinnamon garden, Deheville, Borlasgama, Galkisse, Kelany and Wellewitte, in the neighbourhood of or not very far from Colombo; at Pantura, Wascadowe, Barberyn, Tiboowena, Pantî a, Dodangodde and Calumulle in the Caltura district; at Ratnapoora, Denewakka and Balangodde in the dessavony of Saffragam; and at Ruanwelle in the Three korles. The patient attention, with which you have generally listened to those addresses, and the observations that have often fallen from individuals on their conclusion, leave me no room to doubt, that, at the time they were delivered, they produced an impression on your minds favorable to vaccination. With the view of making that impression more distinct and permanent, as well as of trying to extend it to many who found it inconvenient to attend the meetings referred to, or whose villages in this province I have not had opportunities of visiting, or who reside in parts of the island to which my official duties have never led me, I now propose to recapitulate, in this friendly and familiar form, the principal facts and arguments to which I have so often verbally besought your attention.

You have all seen or heard of small-pox, and know well that it is an infectious, loathsome, and painful disease, which respects neither age, nor sex, nor profession, nor rank; which carries to the grave a very great proportion of the unfortunates it attacks, and leaves those who escape with life, for ever after disfigured with ugly scars, or blind of one or both eyes, or lame and disabled in some useful joint.

Most of you are at least equally well, and it is to be hoped far better, acquainted with cow-pox, and need hardly therefore be told that it is an affection so mild, safe, and free from suffering, as to deserve not really the name of a disease, never proving fatal, or bringing life into danger, and leaving behind it no defect, inconvenience, deformity, or even trace but one or two slight marks on the arms.

If you were under the necessity of choosing betwixt small-pox and cow-pox, that, by submitting to the one you might escape the other, who is there among you that would hesitate in his choice? Now, my honest friends, this is not an imaginary but a real necessity, to which all who have not been successfully vaccinated may be said in truth to be reduced: for, besides, that small-pox has raged in many parts of the island since the month of July last, and at this moment actually stalks abroad, in Colombo, Kandy, and elsewhere, "seeking whom it may devour," you can enjoy no permanent security against its future introduction and propagation, until every one of you shall have been armed against it by vaccination.

"But is the security promised by cow-pox so certain and so perfect as you pretend?" methinks I hear one of you ask, who is ignorant of its past history, or the vast benefits it has conferred on mankind at large, and the incalculable saving of human suffering and life it has effected in this island. "Have we not seen many of our friends attacked, and some of them cut off by small-pox, though they had previously submitted to your so much vaunted preservative, vaccination?"

A full and satisfactory answer to these very natural interrogatories will, I trust, be given in the course of this letter; meanwhile let me request the candid querist to bear in mind the importance of a *precaution*, essential to the success of vaccination, and of a *distinction*, in the diseases which occasionally follow it, indispensably necessary to a just appreciation of the benefits it confers. The *precaution* is, to let the vesicle, or little swelling produced by vaccination, pass through its regular progress, *undisturbed* and *unbroken*, from beginning to end, until it dries up, hardens, and drops from the arm; otherwise we can have no confidence in the security of the individual vaccinated from an attack of small-pox. Now it is well known that, in some parts of the island, so far are you from giving vaccination a fair chance, that you are no sooner out of the vaccinator's sight than you must, forsooth, bathe your child in water, or wash the drop of blood from its arm, or, more perversely still, apply some acrid vegetable juice to the puncture; and, should the vesicle, in spite of this unfair treatment, still struggle into being,

no care whatever is afterwards taken to cherish or protect it. Hence, in so many cases, the absence of those characters in the scar, which enable us afterwards to tell the person bearing them that he runs very little risk of being infected with small-pox, even in its mildest form, and almost none of suffering severely or losing his life from it. Hence, too, the rarity of small-pox among the British troops in Ceylon, from European mothers and nurses esteeming it a very important part of their duty, most carefully to watch the vesicle, and on no account whatever, to permit the child's hands, or any thing capable of rubbing, or breaking the skin, to touch it.

The *distinction* necessary to the just appreciation of the benefits conferred by vaccination is, that, though in almost every case the effect of that operation is to afford undoubted security against the malignant and fatal forms of small-pox, there are yet some cases, bearing indeed a small proportion to the whole number successfully vaccinated, in which a disease resembling it, but generally quite free from danger, occurs. This has been called *modified* small-pox, and assumes a considerable variety of forms, almost all, however, of a mild nature, and some of them, in certain stages, so nearly resembling chicken-pox, that it is difficult, if not impossible, to distinguish with certainty betwixt them. These explanations premised, I trust my friend the querist, and all of you who concur in his scepticism regarding the advantages of cow-pox, will soon see reason to be convinced, that in a vast majority of cases, when successfully passed through, it prevents small-pox altogether; and that, in the small proportions of cases in which that disease occurs after vaccination, it assumes in general so mild a form as to excite little more apprehension than chicken-pox, and to be almost equally free from danger.

The facts and illustrations, bearing upon this important question, may be arranged under the following divisions, to each and all of which I earnestly solicit your best attention.

I. The misery and mortality annually inflicted on Ceylon by small-pox before vaccination was introduced.

II. The comparative infrequency, the limited ravages, and the gradual expulsion of that disease from every part of the island, during the first eight years afterwards, or from 1802 to 1810.

III. The constantly increasing neglect of vaccination during the second eight years, or from 1810 to 1818, and the terrible visitation of small-pox, for which this neglect paved the way in 1819.

IV. The progress of vaccination and the less formidable visitations of small-pox from 1819 up to the present year.

V. A comparison of the four different visitations of small-pox betwixt 1819 and 1837.

VI. The care and attention essential to the success of vaccination and to the security it promises against small-pox.

VII. and lastly, The principal objections started among you to vaccination, with some of the reasons you are in the habit of giving for postponing it, and other obstacles it has to encounter in this island.

I. For many years previous to the introduction of vaccination great devastation was committed annually in this island by small-pox*; according to the most moderate computation it carried off a sixth part of the whole population †; for eight years it had been at all times prevalent, in a certain degree, in the pettah, and scarcely ever failed to visit Colombo and prevail epidemically, in the months of October, November and December, duing the north-east monsoon, when the port was open, and much resorted to by small craft from the opposite coast ‡. In 1799 it appeared in the pettah of Trincomalie, where numbers died daily; and in that and the following year committed considerable ravages there, "and still more in the other parts of Ceylon, particularly in the south-west side, where it occasioned so great a mortality as to be considered in the light of a pestilence,—in consequence of which the natives deserted their villages and infected relatives, on its first appearance, to the great diminution of the revenue, and the infinite distress and misery of the inhabitants||." In the middle of July 1800, it "broke out suddenly in Errore and Undewally (*Vandermal*, Cordiner), two villages in the neighbourhood of Batticaloa, and so great was the panic occasioned amongst the inhabitants, by the appearance of the infection, that all those in health immediately deserted their habitations, and left the helpless sick without any assistance." The elephants, chetahs, and wild hogs soon after "came down from the jungle; broke down the fences; destroyed and rooted up the trees; ate the stores of paddy and other provisions; and, what is still more horrible, carried off some of the sick, or at least consumed the bodies of the deceased. It is certain that in one house, where three sick persons had been left, not a vestige of even their remains was to be found on the return of the inhabitants §." "On such occasions the husband forsakes his wife, the mother her children, and the son his father, often leaving them in their miserable huts to the ravages of famine, and the wild beasts of the forest ⟂."

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* CORDINER'S *Description of Ceylon*, vol. I. p. 254.

† Dr. CHRISTIE'S *Account of the Ravages committed by Small-pox, and of the Introduction, Progress, and Success of Vaccination in Ceylon*, Cheltenham 1811. p. 57. ‡ p. 60. || p. 3. § pp. 4 and 5. ⟂ CORDINER vol. I. p. 254.

Dr. Christie, superintendent of hospitals, accompanied by Mr. Cordiner, chaplain to the garrison of Colombo, visited Errore and Vandermal "on the 4th September, at which time the infection had ceased, and the people had begun to return to their usual habitations; but found their former residence (lately a flourishing village) almost entirely waste and desolate, in consequence of their precipitate desertion." "The ravaged orchards exhibited scenes of terrible devastation; the mangled trees were strewed on the ground; the straw stripped from the roofs of the cottages; the surface of the earth broken up and filled with hollows; the fences shattered; earthen pots, the simple utensils for culinary purposes, wheels, reels, looms, and all the apparatus of the weaver lying useless and forsaken." "Of the diseased in Vandermal forty people died and ten recovered*." In Errore "out of thirteen infected persons six had died, and the others had just recovered and were in a miserable state †."

The distresses here described could not fail to attract attention, and the honorable Frederic North, the humane and benevolent Governor, established at Colombo, Galle, Trincomalie, and Jaffna, small-pox hospitals for the reception of patients labouring under the natural disease, and for the purpose of promoting inoculation ‡: at the same time he appointed medical attendants to take care of the infected in their villages‖.

From the 1st October 1800 to the 30th September 1802, the number of patients, with natural small-pox, treated by the medical overseers in the different hospitals and villages was 2,110;

| | |
|---|---|
| of which number ............................................ | 473 |
| died, being in the proportion nearly of ............. | 1 to 4½: |
| and the number of inoculated patients amounted to | 4,158; |
| of which number............................................ | 108 |
| died, being nearly in the proportion of............... | 1 to 38§. |

*Such and so great, my friends, were the miseries inflicted by* SMALL-POX *on* CEYLON *before* VACCINATION *was known.*

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* CORDINER vol. I. pp. 254 and 255. † CHRISTIE p. 4.

‡ That is the communication of small-pox, in the way we now communicate cow-pox by vaccination, by which the disease was rendered milder and less fatal than when taken in the natural way; but this practise never became so general, in the great mass of the population, even in Europe, as to diminish the mortality, and by keeping up the infection of small-pox, and spreading it to places, which would otherwise have escaped, is calculated to have destroyed more than it saved. From this evil vaccination is wholly exempt; for it is not communicated by infection, or through the air, like small-pox, and, supposing it could be so communicated, it is never fatal; at the same time that it furnishes nearly equal protection against the fatal forms of small-pox, that a first attack of that disease furnishes against the fatal forms of a second.

‖ CHRISTIE pp. 7—9. § p. 15.

II. Vaccination, in this island, was first successfully performed at Trincomalie, on the 11th August 1802, with dried lymph sent from Bombay*, and was speedily communicated by living subjects, or impregnated threads, to every other part of the maritime districts. Variolous inoculation being prohibited, the small-pox hospitals suppressed, and the medical superintendents and overseers transferred to the vaccine establishment, vaccination was practised every morning by all the European surgeons in the island; and those who were stationed in Colombo, in their anxiety to stop the progress of the epidemic small-pox then prevalent, as well as to satisfy the eager wishes of the natives—who flocked in crowds to the vaccinators, seeking security against that dreadful malady—laboured the whole day, and, after vaccinating a hundred persons each, were often obliged to put off many additional applicants to another opportunity †. In little more than three months, upwards of ten thousand persons were vaccinated in different parts of the island. So early as the end of 1802, almost every one susceptible of infection had, in many villages, submitted to vaccination, the natives in general placed implicit confidence in its efficacy, in preventing small-pox, and *that disease had been banished from* HAMBANTOTTE, *after prevailing there from the preceding October*‡. During the first eight months, or up to the end of April 1803, the number vaccinated was estimated at fourteen thousand at least; within that year nine thousand persons, chiefly in the south-west parts of the island were vaccinated, and SMALL-POX *was banished from the district of* COLOMBO, *in the pettah of which it had been at all times prevalent for nine preceding years*‖.

In March 1804 vaccination had got into disrepute and become extinct at Jaffna, from the introduction of a spurious disease in its stead, after passing through which several persons had caught small-pox and died; but Dr. Christie, having spent the greater part of the month there, and introduced the genuine disease from Trincomalie, the practise was thenceforth as successfully and rapidly extended as in any other parts of Ceylon, though the Malabar inhabitants had shewn much more aversion to vaccination than the Singhalese of the south and south-west parts of the island. By April 1804, twenty one thousand individuals had been vaccinated, and SMALL-POX *had been banished from the populous districts of* GALLE *and* MATURA, *as well as of Hambantotte and Colombo* §.

* CHRISTIE p. 26. † pp. 51, 42. ‡ pp. 49, 59. ‖ p. 60. § pp. 67, 69.

From the time when small-pox had disappeared in Colombo, the indifference of the people to vaccination increased daily, and the vaccinators were frequently obliged to search for them in their villages; so that, with all their exertions, not above eight thousand were vaccinated in 1804*. The prevalence, or reported† prevalence, of small-pox in the Kandian country in the month of May 1805, created alarm on the frontier, and increased the number of applications for vaccination, and in *January* 1806 SMALL-POX *was extinct in the district of* JAFFNA, where it had been kept up longer, from the cause already mentioned, than in other parts of the island.

In the following February a man landed from the Coast with small-pox during the pearl fishery at Aripo; and the disease being communicated to a few others was carried to Colombo, on the breaking up of the fishery in April, but did not spread to any extent: no one who had been vaccinated caught it; and the alarm created by its appearance greatly increased the number of vaccinations‡. In January 1807 small-pox appeared and spread in the district of Trincomalie, and from thence found its way to Jaffna; *but was banished from both places during the year by the beneficial influence of vaccination*||. The number vaccinated was considerably greater in this than in any former year, particularly amongst the Malabar inhabitants of the Trincomalie and Jaffna districts, amounting to 21,870, or nearly double the annual average of the period, which had then elapsed from the introduction of vaccination. From May 1806, through 1807, occasional cases of small-pox occurred in Colombo pettah; but *in January* 1808 *the disease was extinct not only in the Colombo district but in the whole of the* BRITISH POSSESSIONS *in Ceylon*, On the 31st of that month, however, it was imported into the district of Galle by a Maldivian boat from Bengal: a large proportion of the crew died, and the disease was communicated by a fisherman, who had visited the boat on its first arrival, to two or three inhabitants of the neighbourhood; but it spread no further.§ In 1808, 26,207 persons were vaccinated.

Small-pox existed in no part of the island from February 1808 to October 1809, when it was carried to Jaffnapatnam by a country boat from Quilon. The contagion spread to a few individuals, in the pettah only, who had not been vaccinated, and was introduced by a civil prisoner into the jail

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* CHRISTIE pp. 73, 74.

† Small-pox had not been known in the Kandian provinces for about 17 years, when it extended to them from the maritime districts in 1819: MARSHALL *Edin. Med. Journal* for 1823. vol. xix p. 71.

‡ CHRISTIE pp. 83, 84 to 90. || pp. 85, 88. § pp. 83—93.

of that place; but its progress was immediately arrested by the indiscriminate vaccination of all the prisoners; and it found its way to no other part of the island, except to Putlam, where a cooly from Jaffna was taken ill of the disease in December, and recovered without communicating it to any other person. On this, as on all similar occasions, the appearance of small-pox had the good effect of proving the preservative efficacy of vaccination, and of rousing the people from their apathy in regard to it; for no fewer than 1,830 persons were vaccinated in the district of Jaffna, in the two last months of 1809, and amongst them several Bramins, men and women, who had hitherto declined submitting to the operation*. Yet the total number vaccinated in 1809 was five hundred less than in 1808, being 25,697.

In January 1810 there remained only six cases of small-pox in Jaffna: the disease was kept up for some time longer by one of the native headmen, who presisted in inoculating with variolous matter, in defiance of a government order forbidding it; and small-pox was detected the same year in several other districts, but did not spread to any extent; only one case occurred in the district of Colombo, in a person who was ascertained to have brought the disease from the Kandian country, and there was no instance of any one who had gone through cow-pox having received the contagion †. The presence of small-pox this year seems to have given an unusually strong impulse to vaccination, for the number vaccinated was 35,076, or more than double the annual average of the preceding eight years.

In February 1813, two recruits for the second Ceylon regiment, labouring under small-pox, landed from the Coast at Chilaw; but the disease did not spread, and with this exception we find no mention of it from 1810 to the middle of 1819; and

*This* INESTIMABLE BLESSING *was conferred on* CEYLON *by* VACCINATION.

III. The absence of small-pox from the island for so long a period had the unfortunate effect of causing an annual diminution in the numbers vaccinated, from 35,076 in 1810 to 13,010, in the maritime districts, and 13,563 in the whole island in 1818. Vaccination had been first introduced into the Kandian provinces so lately before as September 1816, and the total number vaccinated therein up to the end of

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* CHRISTIE pp. 94, 95.

† Dr. HIGH's *Letter to the Editor of the Ceylon Government Gazette*, 2nd February 1811.

June 1819 was 8,291. In the middle of that year, therefore, a great proportion of the inhabitants of the maritime districts, as well as of the Kandian provinces, were unvaccinated; and it is now my painful task to draw your attention to the lamentable consequences of this want of ordinary prudence and foresight— of this strange indifference to the future welfare of themselves and of their families.

Small-pox was introduced in the month of July 1819, by the master of a dhoney from the Malabar coast, and was first discovered in Bankshall, Colombo pettah, among some families who had concealed him. It spread rapidly, seized in a very short time a vast number of people, soon overstepped the bounds of the Colombo district, and, making its way to the Kandian provinces, there committed great ravages. On the first appearance of the disease, hopes were entertained that it might be prevented from spreading by regulating the communication with infected persons; but it was soon found that the contagion had diffused itself much more widely than had been suspected, and it became necessary to adopt other measures. With the view therefore of arresting its progress, and saving as many people as possible from its grasp, all the means that the country afforded of carrying vaccination into effect were placed at the disposal of the vaccine department. Nor did the care of the government, "stop with the means of increasing the practise of vaccination—it extended itself to providing accommodation, food and medical attendance, for such unfortunate sufferers from the disease as were willing to avail themselves of them. The charitable hospital in the pettah of Colombo was thrown open, for the reception of small-pox patients, and establishments, for the reception and care of patients of the same description, were made at every post in the maritime districts and Kandian provinces, at which a medical officer was stationed. These establishments were soon crowded with sick, and the returns from them," observes Dr. Farrell, "evince at once their utility and necessity.*" In Kandy also, an attempt was made to check the progress of the disease, by separating the sick from the healthy; but, notwithstanding every exertion, the hospital became crowded and inadequate for the accommodation of all the candidates for admission. It was, therefore, necessary to confine the admissions to the more indigent and destitute of the afflicted; and "indeed a large proportion of the patients, latterly received into hospital, were individuals whose relations had completely deserted them. Thus abandoned by every one, they were often found lying in the

* *Letter to the Deputy Secretary to Government*, 20th January 1819.

streets, in a very advanced stage of the disease. People were appointed to convey cases of this kind to hospital, where, although in many instances little could be done for them, in regard to the exhibition of medicine, they received that attention which their condition required.* "

During the six months, terminating on the 15th January 1820, in the maritime districts alone, .. ....... 5,451
persons were ascertained to have had the disease, and 1,745
to have died, being nearly in the proportion of.... 1 to 3
or more exactly of ........................ 10 to 31 :

And, during the five months terminating on the same day, in the Kandian provinces ............ 2,423
were admitted into hospitals established for their accommodation, and ....................... 1,200
died, being nearly in the proportion of .......... 1 to 2 :
Into the Kandy hospital alone ................ 931
persons were admitted and ................... 525
of them died, being in the proportion of about.... 10 to 18.

The total number of cases reported to government in the six months, during which chiefly the disease seems to have prevailed, was .................. 7,874 ;
and the total number of deaths ................ 2,945,
being in the proportion of .................... 10 to 26.

THIS AWFUL PUNISHMENT, *inflicted alike on the guiltless child and its improvident parent, was brought on the* PEOPLE OF CEYLON *by* THEIR NEGLECT OF VACCINATION.

IV. The panic inspired by a pestilence, so destructive and so widely spread, swept before it the obstacles to vaccination. "It dispelled the apathy and subdued the prejudices of many a stubborn Mussulman, forcing him to seek security and safety from a measure, to which no other species of fear would have driven him.† " Within six months after the first appearance of the disease, the extraordinary number of 55,710, and within the whole year 62,660 persons were vaccinated, of whom 48,411 inhabited the maritime districts, and 14,249 the Kandian provinces. The number vaccinated in these last, during the second six months of 1819, was 13,770, or considerably more than one and a half of the whole that had previously passed through cow-pox, from its first introduction in September 1816. In the month of November alone, 18,670 persons or upon an average 622 a day, were vaccinated in the maritime districts, and 5,456 or 182 a day in the Kandian provinces. The good effects of these vigorous measures were strikingly manifested in the diminished numbers of admissions and deaths, exhibited by returns received from all parts of the

* Deputy Inspector General MARSHALL in Edin. Med. and Surgl. Journal for 1823. vol. xix. p. 71. &c. † DR. FARRELL'S *Letter*.

country on the 20th January*—than which no later accounts of the disease have been preserved.

The number vaccinated annually had diminished in 1822 to 14,542; but rose in 1823 to 17,735; in 1824 (during which small-pox prevailed though to what extent is unknown) to 26,623; and in 1825 to 27,424; fell off again in 1826, and still more in 1827; increased a little in 1828; and, in 1829 attained to 38,015, which was greatly superior to the number for any intermediate year from 1819.†

In January 1830 small-pox appeared in Colombo, and afterwards spread to the Four korles, Kandy, Doombera, Matele, and Fort M'Donald. Three cases occurred at Trincomalie, the same number at Galle, and a few at Aripo and Manaar, during the pearl fishery. But, although it did not leave the island in less than fourteen months, its ravages were not to be compared, in either extent or severity, with those it had committed in less than half that time in 1819;

the number attacked in the maritime districts being only .................................... 813,
—and 194 of them modified—and the number who died .................................... 194,
which is in the proportion of .................... 10 to 42;
while the number attacked in the Kandian provinces was .................................... 198,
—none of them being modified—and the number who died .................................... 110,
which is in the proportion of .................... 10 to 18:
The number of cases, therefore, throughout the island was .................................... 1011,
and the number of deaths .......................... 257,
which is in the proportion of .................... 10 to 39.

There were besides 217 cases, in the maritime districts, returned under chicken-pox.

In 1830 the number vaccinated rose to 63,284, which was higher than in any former year, and must have contributed very materially to limit the range and diminish the mortality of small-pox then prevalent. For the next three years, vaccination was conducted with very considerable success, the number protected by it in the last of them being 24,556.

The visit paid us by small-pox in 1833 must be yet fresh in the recollection of you all. It was first detected in October

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* Dr. Farrell's *Letter*.

† The increase in this last, above the preceding nine years, appears to have been due partly to the earnestness with which Dr. Forbes applied his mind to the promotion of vaccination, on his first arrival in Ceylon in the end of 1828, and partly to the allowance for travelling expences which, on his recommendation in March 1829, was granted by Government to vaccinators proceeding in the performance of their duties, beyond six miles from home.

of that year;—prevailed more or less until December 1834; was almost entirely confined to the maritime districts; and in the fourteen months, over which it was spread, attacked throughout the island only.................... 460
persons,—107 having it in the modified form—and
proved fatal in.............................. 112.
giving the proportion of..................... 10 to 42.

In the same period 253 cases of chicken-pox occurred, and two of them fell victims to dysentery.

This very mild visitation of small-pox had a less remarkable effect in promoting vaccination than either of the two which preceded it; for with all the efforts of the vaccine department 35,410 persons only were vaccinated in 1834—a number not greatly exceeding one half the number vaccinated in 1819, or 1830. In 1835 the number was 24,319; and in 1836, 24,491.

None of you can be ignorant that small-pox has prevailed. for the last ten months, to considerable extent and with great severity, in different parts of the island. It was first detected in Colombo on the 14th of July, in three unvaccinated Moormen, natives of Tutticoreen. By other unvaccinated Moormen, it was carried to Caltura and Barberyn. Through an unvaccinated Hakooro, on a visit to Caltura, it found its way to the nearly inaccessible village of Naebodde, in Iddegodde pattoe, Pasdoem korle; and, probably by means of Moor pedlars, was transported to the remote and distant Mootetoogame, in Kadawitte korle, Saffragam. How it obtained a footing in the Seven korles is not known; but. by the 10th of September, it had reached Wallewe, Giratalawe pattoe, about twenty miles to the east of Chilaw, and afterwards spread to the neighbouring villages of Pehimbie and Pallagame. The disease appears to have been carried more directly from the Coast to Jaffna, by the way of Rammisseram; and has visited a great many other towns and villages, as Badulla, Ratnapoora, Kandy, Galle, Matura &c.. without however raging so fiercely, or proving so fatal. as in the places first mentioned.

In the beginning of this month the disease assumed a very threatening aspect in Kandy. A wellale from Colombo and Kornegalle had indeed carried it thither, so early as the 3rd September, but. during the four succeeding months, only six other mild cases had occurred, and five of these in natives of Colombo, Amblangodde, and Galle, two of them being recently from the maritime provinces. On the 9th of April an unvaccinated Moorman, residing in Kandy but a native of Galle, was attacked with the disease in a confluent form. and died on the 22nd: on the 20th of the same month a child, whose mother was reported to have died of the disease. but to

have been concealed, was found labouring under it, in the Malay Lines: one of the inhabitants was attacked, on the 3d May; six or seven on the 4th; fifteen on the 5th and from three to six daily from this to the 10th, since which not more than one or two seems to have occurred daily, if we except the 14th, in the Return for which five new cases appear. Eighty four cases altogether have hitherto appeared in Kandy—76 of them during the present month—twenty three have already terminated fatally, and thirty remain under treatment. The other parts of the Central province, in which the disease has shewn itself, for the first time this month, are Doombera, Oodoonuwera, Hewahette, Matele, Nuwera Ellia, Kohoke korle, and Kornegalle—forty two cases and nine deaths having been reported from them all, and twenty three remaining under treatment or observation.

But during the last four months small-pox has prevailed chiefly, most severely, and most fatally, in Slave island; and also, during the first half of that period, in the Colpetty, Maliban or Land street, and Fishers quarters Colombo. Several fatal cases have occurred in Timbirigasgawe, Morottoo, and other villages of the Salpitty korle; and we have too much reason to fear that the disease has not yet spent its force, but may spread extensively through that and the neighbouring korles.

The following are the numbers that have been attacked with small-pox and died, from the first appearance of the disease, on the 14th July 1836, to the 29th May 1837, with the proportion of fatal cases to the whole, and the numbers remaining sick or convalescent, in different parts of the island.

| Places. | Number of cases. | Number of deaths. | Proportion of deaths to cases: as 10 to | Remain sick or convalescent. |
|---|---|---|---|---|
| Colombo and neighbourhood - - | 571 | 152 | 38 | 48 |
| Calpentyn - - - - - - | 42 | 3 | 140 | 2 |
| Aripo and Manaar - - - | 4 | 1 | 40 | 0 |
| Jaffna - - - - - - | 43 | 13 | 33 | 2 |
| Hewagam and Hina korles - - | 8 | 3 | 27 | 0 |
| Salpitty korle - - - - | 35 | 10 | 35 | 3 |
| Caltura and neighbourhood - - | 54 | 16 | 34 | 5 |
| Naebodde and Nachinne Pasdoem korle | 59 | 23 | 26 | 0 |
| Galle - - - - - - - | 27 | 1 | 270 | 9 |
| Ratnapoora - - - - - - - | 3 | 1 | 30 | 0 |
| Kadawitte korle, Saffragam - - | 51 | 24 | 21 | 0 |
| Ambepoose - - - - - | 15 | 6 | 25 | 1 |
| Giritalawe pattoe, Seven korles - - | 30 | 18 | 17 | 0 |
| Kandy - - - - - - | 84 | 23 | 37 | 30 |
| Other parts of the Central province - | 42 | 9 | 47 | 23 |
| Negombo, Matura, Batticaloa, Mahare, Ruanwelle, and Badulla - | 34 | None | 0 | 0 |
| Total.— | 1102 | 303 | 36 | 126 |

In addition to the above there have ocurred 270 cases of chicken-pox.

*In* SIX *months of* 1819 *small-pox attacked* THREE *times, and caused the death of considerably above* FOUR *times, the number of persons that it has done during its* THREE *subsequent visitations together, comprehending a period of* THIRTY EIGHT *months.*

V. Let us now compare the number of cases that occurred, and the number that terminated fatally in equal portions of the four different visitations of small-pox, we have just passed in review, beginning in each with the month and day, on which the disease was known or believed to have first appeared.

1. During the six months ending in January 1820,

5,451 cases and 1,745 deaths, or 10 to 31, { occurred in the maritime districts;
2,423 ........ 1,200 ............ 20, Kandian provinces;
7,874 ........ 2,945 ............ 27, whole island.

To help you to account for this frightful sickness and mortality, I have only to refer you to a former part of this letter, in which I told you that the numbers, who protected themselves from small-pox by vaccination, diminished annually from 35,076 in 1810, to 13,010 (or little more than one third so many) in 1818, in the maritime districts; and that 8,291 was the whole number, that had submitted to vaccination, in the Kandian provinces, from its first introduction to the end of June 1819, the month before small-pox appeared.

2. During the six months ending in July 1830,

509 cases and 103, or 10 to 49, deaths { occurred in the maritime districts:
129 .......... 64 ........ 20........ Kandian provinces;
638 ........ 167 ........ 38 ........ whole island.

It hence appears, that, in the maritime districts, eleven persons were attacked with small-pox in 1819, for every one that was attacked in 1830; and eighteen persons died in 1819, for every one that died in 1830; while, in the Kandian provinces, nineteen persons were attacked and nineteen died in 1819, for every one that was attacked, and for every one that died in 1830.

To help you to account for this extraordinary difference, in the number of victims to small-pox, in equal portions of two different years, I shall only observe, that,

| | Maritime districts. | Kandian provinces. | Whole island. |
|---|---|---|---|
| Firstly,—During the 10½ years immediately preceding the first visit, or from January 1809 to June 1819 inclusive, the number vaccinated was, in the | 230,184 | 8,291 | 238,475 ; |
| While during the 10½ years immediately preceding the second visit, or from July 1819 to December 1829, the number vaccinated was, in the | 250,377 | 36,832 | 287,209 ; |
| So that the number of the inhabitants protected from small-pox by vaccination, during the second, exceeded the number protected during the first mentioned period, by | 20,193 | 28,541 | 48,734 : |

And secondly,—During the first visit of small-pox, hospitals were established in all parts of the country, and the people *invited* to enter them ; while during the second visit every person affected with small-pox was *compelled* to remain secluded until his recovery, either in his own house or in a public hospital.

3. During the six months ending in April 1834,

344 cases and 94, or 10 to 37, deaths { occurred in the maritime districts ;
3 ........ 0 ........ 0 ........ Kandian provinces;
347 ........ 94 ........ 38 ........ whole island.

It hence appears, that, in the whole island, twenty three persons were attacked by small-pox in 1819, for every one that was attacked in 1833-34, and thirty one persons died in 1819 for every one that died in 1833-34; while, in the last mentioned years, the Kandian provinces almost entirely escaped.

To help you to account for this more extraordinary and increasing difference, in the number of victims to small-pox in equal portions of two different years, I shall only observe, that,

| | Maritime districts. | Kandian provinces. | Whole island. |
|---|---|---|---|
| Firstly,—During the 14 years and 4 months, immediately preceding the first visit, or from March 1805 to June 1819, the number vaccinated was, in the | 308,627 | 8,291 | 316,918, |

| | Maritime districts. | Kandian provinces. | Whole island. |
|---|---|---|---|
| While during the 14 years and 4 months, immediately preceding the third visit, or from July 1819 to October 1833, the number was, in the | 386,004 | 56,493 | 442,497 ; |
| So that the number of the inhabitants protected from small-pox by vaccination, during the second, exceeded the number protected during the first mentioned period, by | 77,377 | 48,202 | 125,579 : |

And secondly,—Cases of small-pox were disposed of in 1833-34 as they had been in 1830, and not permitted to be at large as in 1819.

4. During the six months ending in January 1837,

211 cases and 68, or 10 to 31, deaths occurred in the maritime districts ;
111 ........ 44 ........ 25 ........ Kandian provinces;
322 ...... 112 ........ 29 ........ whole island.

It hence appears, that, in the maritime districts, twenty six persons were attacked with small-pox in 1819 for every one that was attacked in 1836, and twenty six persons died in 1819 for every one that died in 1836 ; while, in the Kandian provinces, twenty two persons were attacked in 1819 for every one that was attacked in 1836, and twenty seven persons died in 1819 for every one that died in 1836.

To help you to account for this still extraordinary (I wish I could add *and increasing*) difference, in the number of victims to small-pox in equal portions of two different years I may observe, that,

| | Maritime districts | Kandian provinces | Whole island |
|---|---|---|---|
| Firstly,—During the 17 years (less one month), immediately preceding the first visit, or from August 1802 to June 1819, the number vaccinated was in the | 333,219 | 8,291 | 341,510, |
| While during the 17 years (less one month) immediately preceding the fourth visit, or from August 1819 to June 1836, the number was, in the | 453,226 | 61,471 | 514.697 ; |
| So that the number of the inhabitants protected from small-pox by vaccination during the second, exceeded the number protected during the first mentioned period, by | 120,007 | 53,180 | 173,187 : |

But secondly,—The seclusion of persons affected with small-pox was less rigidly and less systematically enforced, towards the close of the six months of 1836, than it had been, throughout the like portions of 1830 and 1833-34.

Such is a comparison of the most severe recorded visitation of small-pox to this island, that of 1819, with its three more recent and less formidable inroads. To complete the comparison, let us extend it to these last with each other.

We have seen that during the six months ending in

| | Maritime districts | | Kandian provinces | | Whole island | |
|---|---|---|---|---|---|---|
| | Were attacked | Died | Were attacked | Died | Were attacked | Died |
| July 1830 | 509 | 103 | 129 | 64 | 638 | 167 |
| April 1834 | 344 | 94 | 3 | 0 | 347 | 94 |
| January 1837 | 211 | 68 | 111 | 44 | 322 | 112 |

To help you to account for these differences, in equal portions of three different years, I may observe, that,

| | Maritime districts | Kandian provinces | Whole island |
|---|---|---|---|
| Firstly,—During the 3 years and 10 months immediately preceding the second visit, or from March 1826 to December 1829, the number vaccinated was, in the | 82,185 | 6,971 | 89,156; |
| While, during the 3 years and 10 months immediately preceding the third visit, or from January 1830 to October 1833, the number vaccinated was | 135,627 | 19,661 | 155,288 |
| So that the number protected from small-pox by vaccination during the second exceeded the number protected during the first mentioned period by | 53,442 | 12,690 | 66,132: |
| Secondly,—During the 6 years and 6 months immediately preceding the second visit, or from July 1823 to December 1829, the number vaccinated was | 143,665 | 16,117 | 159,782; |
| While, during the 6 years and 6 months immediately preceding the fourth visit, or from January 1830 to June 1836, the number vaccinated was | 204,934 | 24,718 | 229,652; |

| | Maritime districts | Kandian Provinces | Whole island |
|---|---|---|---|
| So that the number protected from small-pox by vaccination during the second exceeded the number protected during the first mentioned period by | 61,269 | 8,601 | 69,870 |
| Third and lastly,—During the 2 years and 8 months immediately preceding the third visit, or from March 1831 to October 1833, the number vaccinated was | 72.757 | 11,448 | 84,205 |
| While, during the 2 years and 8 months immediately preceding the fourth visit, or from November 1833 to June 1836, the number vaccinated was | 69,307 | 5,057 | 74,364 |
| So that the number protected from small-pox by vaccination during the second *fell short* of the number protected during the first mentioned period by | 3,450 | 6.391 | 9,841 |

The following table will enable you to follow up the comparison of the second, third, and fourth epidemics, beyond the first six months, to which the want of materials limited us, in contrasting them with that of 1819.

| Epidemic of | | Maritime districts | | Kan dian provinces | | Whole island | | Remaining 29th May 1837 |
|---|---|---|---|---|---|---|---|---|
| | | Cases | Deaths | Cases | Deaths | Cases | Deaths | |
| 1830 | First 6 months | 509 | 103 | 129 | 64 | 638 | 167 | |
| | Next 8 months | 304 | 91 | 69 | 46 | 373 | 90 | |
| | Total | 813 | 194 | 198 | 110 | 1,011 | 257 | |
| 1833 | First 6 months | 344 | 94 | 3 | 0 | 347 | 94 | |
| | Next 8 months | 67 | 17 | 46 | 1 | 113 | 18 | |
| | Total | 411 | 111 | 49 | 1 | 460 | 112 | |
| 1836 | First 6 months | 211 | 68 | 111 | 44 | 322 | 112 | |
| | Next 4½ months | 642 | 154 | 138 | 37 | 780 | 191 | 135 |
| | Total | 853 | 222 | 249 | 81 | 1,102 | 303 | 135 |

In examining this table, you cannot fail to be struck with a very alarming peculiarity of the present epidemic—that of

spreading more rapidly and proving more destructive, instead of becoming, like its three predecessors, less prevalent and less fatal, and gradually dying away, after the first six months. It, on the contrary, has attacked *a greater number* of persons in the Kandian provinces—above *three times the number* in the maritime districts—and nearly *twice and a half the number* in the whole island, during the last *four and a half* months, that it had attacked during the preceding *six*. I will not presume to say, how much of this peculiarity may arise from the comparatively small number of you that submitted to vaccination, betwixt the two epidemics of 1833 and 1836—how much from your backwardness, in seeking safety through the same channel, since the present appeared, and how much from the clamour you have raised, and the opposition you have offered, to the execution of the laws for the protection of the public from infection—though these laws have never been enforced in all their rigour:—but few of you will, I apprehend, be inclined to dispute that each of the causes referred to has contributed, more or less, to the unfortunate result.

From the review we have now taken of all the visitations of small-pox to this island, of which the particulars have reached us, it appears that, during

| | | | |
|---|---|---|---|
| the 2 years ending in Sept. 1802 | 2,110 cases | and 473 deaths, | or 10 deaths to every 45 cases, occurred. |
| 6 months of 1819... | 7,874...... | 2,945............ | 26............ |
| 14...... 1830-31... | 1,011...... | 257............ | 39............ |
| 14...... 1833-34... | 460...... | 112............ | 42............ |
| 10½ ... 1836-37... | 1,102...... | 303............ | 36............ |
| Total | 12,557 | 4,090 | 30 |

*For every* THREE *persons, therefore, attacked with small-pox in Ceylon, during the last thirty eight years,* ONE *has died.*

VI. The number, precision, and authenticity of the facts and statements, to which I have directed your attention, will I hope convince the most sceptical among you of the power of vaccination, in a vast majority of cases, to prevent small-pox, and of the incalculable saving of human suffering and life it has thereby effected in this island, during the last thirty five years. Nobody, who knows any thing of the matter, ever thought of ascribing this protecting influence, to the mere act of inserting with a lancet a little vaccine lymph under the skin, this insertion being only the preparatory step to a series of changes in the part, and in the constitution, which are indispensable to the success of the operation. It would be foreign to the purpose, for which I now address you, particularly to describe those changes; and I shall content

myself with observing, that vaccination causes a little, hard, inflamed swelling, or pimple, to arise on the part, into which the fluid has been inserted, terminating in a blister or vesicle, with a depressed centre, and full, swollen margin, which begins, about the end of the seventh or the eighth day, to be encircled by a thickening, hardness, and discolouration of the skin, (from the natural hue to a florid red in Europeans, and to a darker shade than the neighbouring parts in natives), and is often attended by very slight fever, or little swellings in the armpits. I need not inform you that a little round blister, containing a clear colourless fluid, may also be produced, on any part of the skin, by a drop of boiling water, and that if this is opened by a needle or lancet, the whole fluid will at once escape, and the thin outer or scarf skin, losing its support, fall flat upon the part, dry, shrivel up, separate, and be replaced by new skin,—so like the old, that, in a short time, the scalded spot cannot be pointed out. You may not perhaps know so well, that if the blister or vesicle caused by vaccination is opened by a needle or lancet, the fluid does not escape at once and completely, but in part only and by slow degrees, nor does the scarf skin fall down upon the arm. The reason of this striking difference is, that, in a common blister from boiling water, as well as in the vesicle of chicken-pox and the pustule of small-pox, the fluid is contained in one cavity; whereas, in the vaccine vesicle, it is contained in little cells, with partitions betwixt them, like those of a honeycomb.

When this vesicle is neither opened nor broken, but allowed to follow its natural course, it gradually dries, hardens, and falls off, leaving the skin beneath sound and entire, but impressed with a slight, though permanent mark, of its own size and shape, and subdivided into little pits or hollows, corresponding to the original cells, of which it was composed. This is what we call a *satisfactory mark of vaccination*, and no individual wanting it—how often soever he may have submitted to vaccination—whatever number of scars, of other kinds, his arms may exhibit—ought ever to expose himself to the infection of small-pox.

When, again, the vesicle is rubbed, or scratched and broken, by neglecting to have the child cured of itch before vaccination; or by carelessness in dressing, or nursing, or bathing and drying it; or by permitting it to roll, and sprawl, and tumble about on the floor, a little sore is produced, which eats away the surface of the skin, destroys the impression of the cells, into which the vesicle was divided, and, at length healing up, leaves a smooth, uniform scar, often large enough in all conscience, but never satisfactory, because *the same kind of scar* may proceed from *an ordinary boil, or the prick of a thorn, or*

*a neglected tick-bite*, or *Malabar itch*, or, in short, *any cause capable of breaking and producing ulceration of the skin.*

Now that you understand what I mean by *satisfactory* vaccination, I may refer you to the "distinction, necessary to the just appreciation of the benefits conferred by that operation,"—which I requested you to bear in mind near the beginning of this letter,—and go on to illustrate the proposition, "That, in the small proportion of cases, in which small-pox occurs after vaccination, it assumes in general so mild a form, as to excite little more apprehension than chicken-pox, and to be almost equally free from danger."

Since the year 1830, the arms of every person affected with small-pox, who has come under the observation of the officers of the vaccine department, in this island, have been examined, and the appearances written down when he was first seen, and before it could be known whether he was to recover or die. Of 312 cases, which in this way I myself examined in 1830—123 acknowledged that they had never been vaccinated, and 113 more (who said they had been vaccinated) had either no marks, or unsatisfactory marks of vaccination, making 236 in all. Of this number 91 died, giving the proportion of ten deaths to every twenty six cases. Of the remaining 76, who had satisfactory marks of vaccination, only one died, giving the proportion of ten deaths to every 760 cases. During the same epidemic, there were four persons who had laboured under small-pox in preceding years attacked a *second time* with that disease, and *two of them died of this second attack.* Again, in the epidemic of 1833-34—of 425 cases of small-pox, reported by different medical officers to the superintendent general of vaccination, 314 had either never undergone, or, in the opinions of those officers, bore no satisfactory marks of vaccination; and 107 of them died, giving the proportion of ten deaths to every twenty nine cases. Of the remaining 111, that had been successfully vaccinated, only two died, giving the proportion of ten deaths to every 555 cases. Taking the two epidemics together we have 737 cases, of which 550 had no satisfactory marks of vaccination, and of these last 198 died, giving the proportion of ten to twenty eight, or more than one to three; while of the remaining 187, who had satisfactory marks of vaccination, only three died, giving the proportion of 10 to 623, or one to sixty two. At this rate, if one hundred and twenty four persons were attacked with small-pox in two villages—sixty two in each—and all the inhabitants of the one, but none of the other, had been satisfactorily vaccinated, in the first village ONE only, and in the second, TWENTY TWO should die; are you, then, by neglecting vaccination to

abandon to certain death twenty two out of every sixty two among you, who may be unfortunately seized with small-pox, merely because that admirable gift of Providence would enable you to save the lives of TWENTY ONE only, and not of the whole TWENTY TWO?

*Such is the character of the strongest objection to vaccination,—futile and absurd, as you must acknowledge it to be,—that has ever yet been brought forward.*

VII. But, though the strongest, this is not the only objection to vaccination, that has been started among you; and a few others, with some of your excuses for postponing it, and the obtacles you throw in its way, I proceed to notice before taking leave of you. There are, indeed, some of you, who obstinately reject vaccination, without condescending to give any reason. "The people of the country are ignorant, and treated as slaves," say the inhabitants of Slave island, and the Colpetty, to Mr. Coopman, "but we are not slaves, though you would treat us as such, nor are we bound to submit to vaccination. If we choose of our own free will to be vaccinated, well and good; but we do not choose, we are not obliged to give you our reasons, and we will give you none. The judges tell you that they cannot force us to submit to vaccination; and, as we refuse to submit, let us take the consequences." This fine speech—manly and independent, though by some it may be deemed,—must appear an empty bluster to the more reflecting among you, who have been taught by experience, that, so far from imposing upon you any of the pains and penalties of slavery, vaccination really rescues you from the dominion of the most ruthless tyrant, that imagination can conceive,—the most loathsome and fatal disease, to which the human race is exposed.

"Let us take the consequences," have they the hardihood to say; and poor, miserable, mistaken creatures, *they have taken and are taking the consequences*, as most of you will learn with horror from what follows.

Of 1102 cases of small-pox—the whole number known to have occurred in Ceylon, from the 14th of July last to the 29th of May, *no fewer than* 250 *have occurred in Slave island*, and 247, or all but 3 of them, during the last four months and a half, or since the 3rd of January. SIXTY FIVE of these thoughtless and improvident beings have already died, and TWENTY THREE continue on the sick returns. Eighty six out of the 247 occurred among the men, women, and children, of the Ceylon Rifle regiment. Of the remaining 161 cases, 128 had no satisfactory marks of vaccination, and 48 of

them are already dead; 33 had satisfactory marks, and 1 of them also is dead. I am bound, at the same time, to add, (though I do not profess to be able to explain this very singular anomaly) that, of sixteen fatal cases in the Ceylon regiment, seven are reported to have had satisfactory marks of vaccination.

Of 68 cases of small-pox, admitted into the Marendahn hospital from 14th July to 5th January, one only,—but of 233 cases, admitted from 6th January to 29th May, 128,—came from Slave island. Of 28 cases, that terminated fatally in the same establishment, from 14th July to 5th January, one only (the above admitted),—but of 66 cases that terminated fatally from 6th January to 29th May, 41,—were from Slave island; and of 31 cases, remaining under treatment on the last mentioned day, 15 came from it.

In the Colpetty, again, twenty five cases of small-pox have occurred,—twenty three of them within the last three months, or since the 6th of January,—eight have died, and four remain under treatment. None of the fatal cases had satisfactory marks of vaccination.

*Such is the painful and melancholy result of the mistaken notions of the inhabitants of the Colpetty and Slave island on the object and advantages of vaccination.*

" If it be our lot," some of you tell the vaccinators, " that God afflict us with small-pox, neither you, nor they that sent you, can prevent it: die we must, and once only: if we escape small-pox, there are other diseases to carry us off: and, supposing we were to die, would it be any loss to government? Better it were to die, and let our children die, than to see them thus tormented." This is just about as wise as it would be to reply to the agent of government, inquiring, why you had neglected to irrigate, and plough, and sow, and reap your paddy fields? " If it be our lot that God bless us with an abundant supply of food, neither our exertions, nor the assistance and co-operation of our neighbours, are wanted. If He do not think fit to fill our stores with paddy, He will doubtless provide a convenient substitute, in the form of jack fruit, or plantains, or sweet potatoes, or one or other of the finer grains, as kurakkan, or meneri or mun; so that it is better for us to sit on our haunches, counting our fingers at home, than to incur so much toil and trouble for what a bountiful Providence will of course send us, whether we exert ourselves or not. If, on the contrary, we are predestined to die of hunger, no efforts of ours can possibly prevent it."

Some Moors and Malays, whilst they admit that it is a duty they owe their children of both sexes, to have them vaccinated in early life, would rather (they affirm) sacrifice their own lives, and leave those of their wives and grown up daughters exposed to danger from small-pox, than permit them to be seen by a christian vaccinator. But these principles sometimes desert them, under the panic inspired by the prevalence of small-pox. Soon after the disease appeared in July last, the Moors of Colombo petitioned the superintendent general of vaccination "to cause their women and children to be inspected, and certificates granted to those who had been vaccinated, and properly affected with the genuine cow-pox;" and afterwards permitted their grown up females, as well as their children, who required it, to be vaccinated. May I hope that all of you, my Mahomedan friends of Putlam, and Calpentyn, and Caltura, and Marendahn, and the remnant, whom this fell scourge may have yet spared in Slave island, will not only now follow the praise-worthy example set you by your brethren of Moor-street, but make it your study, at all times and under all circumstances, to have every member of your families, young and old, protected from small-pox by vaccination?

"Why does government, and why do you," asks another party, "take so much trouble in going about to vaccinate? We know, as well as yourselves, you do it only for your pay. You have six pice a head, and the more people you vaccinate the more money you get. We do not believe your superiors are half so zealous in sending you as you pretend. If vaccination is so very beneficial, keep it for yourselves; we want none of it: sure we are, that, were it worth a single pice, you would not be so liberal. If you really are, as you say, anxious to do us good, bring and distribute among us some rix-dollars, and thus prove the sincerity of your professions."

Now, supposing King William the Fourth thought it better to have a parcel of idle rogues and vagabonds, for his subjects in Ceylon, than loyal, industrious, "good men and true," as I verily believe you all are, do you in candour think he could hit upon a speedier, or more infallible method, of attaining his object, than by issuing a mandate to his trusty and well beloved cousin, the honorable the treasurer in Ceylon, to unlock his iron-chest and distribute its contents among you? Your eagerness to grabble the rupees and the rix-dollars would prevent you, for a good while, from thinking at all of the officers, through whom they were dispensed to you; but, when you had leisure for reflection, would you ever think of complaining that the treasurer and his assistants were paid, for all the trouble they had had, in telling over

the money, and in dispensing it fairly and equally among you, and in giving you their best advice how to take care of and manage it?—or of saying, "I'll be hanged if I accept this generous largess, or a single fanam of it, so long as our self-styled friend the treasurer, and his smooth-tongued and wily assistants find it their interest to tell me it will do me good. It is true, they are paid by the King, and take nothing out of my pocket, and I acknowledge that what they offer me may be the means of saving my life; still I am determined to reject this benefit, inestimable as it undeniably is, unless the agents employed in dispensing it, can afford, and are willing, to work hard, without either thanks or pay."

Ignorance of the proper object of vaccination is, with some of you, an obstacle to its adoption. "We have known persons, who were attacked with measles after vaccination," say the inhabitants of the Three korles to Mr. De Zilwa, "and, unless you promise us certificates that we shall run no risk of taking either measles, or chicken-pox, or small-pox, we shall not submit to vaccination." It would be just as reasonable in any of you, who might be exposed to the causes of dysentery, or jungle fever, to protest against the use of precautions, that were known to have the power of preventing, or greatly mitigating the severity of those diseases, on the ground that the same precautions could not protect you, also, from leprosy, and Galle-leg, or save the skin of your great toe, when you happened to run it against a sharp stone.

Some of you, without openly rejecting vaccination, have always an excuse for postponing it, such as, "It is not convenient now: when we wish vaccination we will let you know." "I'd rather not have my children vaccinated from a native; pray oblige me by trying to bring a child of European parents." "Any other day would have answered, but you must excuse me from having vaccination performed in my house on Good-friday." "The new-year holidays are at hand; but we promise to have ourselves and children vaccinated, when they are over." "It is seed-time or harvest, and we are all too busy in the fields, to be able to attend for vaccination," "Our children are too young, or they are not weaned, or they are afraid, or have fever, or a cutaneous eruption, or are just recovering from illness."

Most of these excuses are very frivolous at all times, and frivolous beyond measure during the prevalence of small-pox, which respects neither times, nor seasons, nor age, nor sex; while cow-pox is so mild an ailment that the youngest children may pass through it successfully. During the prevalence of small-pox, indeed, children ought to be vaccinated within a month from birth; though, during its absence, three months is

probably the best age, so that the whole may be over before the irritation of teething begins. Chronic cutaneous eruptions do not in general interfere with the success of vaccination, and ought not to prevent it; but we should always recommend parents to adopt measures for getting their children cured of itch before subjecting them to it, as the irritation produced by that disease leaves the vesicle little or no chance of attaining maturity.

One good vesicle, passing through all its stages unbroken, gives equal protection as a hundred, against the infection of small-pox; but, to increase the chance of having one or more perfect vesicles, it is usual to make two punctures in each arm. Provided one vesicle is left untouched, lymph may be taken from a second, third, or fourth, without the slightest injury to the person bearing them. Unvaccinated persons are, therefore, entitled to the same privilege from the vaccinated, having more than one good vesicle, that these last claimed from those who had passed through cow-pox before them; and I should have thought this rule so obvious to you all as to have required no mention, if two very striking examples had not lately shewn that it is by no means universally recognised. One of these occurred at Marendahn, the other in Colombo Fort. Of twenty eight Moor children, vaccinated at Marendahn on the 1st of March, twenty four returned for inspection on the 8th. In six of them the operation had entirely failed. In each of the remaining eighteen, from one to four vesicles had come forward; but every one of these vesicles was found broken on inspection, and about two-thirds of them had been evidently broken on purpose to prevent lymph being taken from them. One of the parents had the effrontery to offer me, carefully wrapped in paper, a soft crust, which he had cruelly scraped from the raw arm of his child, the same morning, in expectation of receiving four fanams,—a reward I had promised for every *dried vesicle, that had not been touched before its spontaneous separation from the arm.* Vaccination was, consequently, interrupted, in that suburb.

The second example was that of two Burghers in the Fort, who obstinately refused to allow lymph to be taken from second and third vesicles in their children, on the 16th of the same month; and thereby disappointed several European and native mothers, anxiously expecting to have their children vaccinated on that day.

If I have succeeded in convincing you of the advantages of vaccination, and of the precautions required to secure its protecting powers, I hope you will lose no time in acting upon that conviction:

1. By taking the earliest opportunity of subjecting to vaccination every member of your family and household, who has not already undergone satisfactorily that operation.

2. By taking all possible care to prevent the vesicles being rubbed or broken.

3. By returning to the vaccinator for inspection at least twice after the operation, namely, on the 8th and 15th days.

4. By freely offering to your neighbours, what you have freely received, lymph (or fluid), for their vaccination from your own or your childrens' arms.

5. By encouraging and promoting vaccination, to the utmost extent of your power, and influence, not in your own families only, but among your kindred, your connections, your dependents, and the whole community.

That you may all escape, now and hereafter, the painful and fatal disease, against which it has been the object of this letter to warn and defend you, is the hope and prayer of

Your sincere friend and wellwisher,

J. KINNIS.

*Colombo May* 31, 1837.

For your information I annex an

Abstract

Abstract of the total number successfully vaccinated in Ceylon from the first introduction of Cow-pox in August 1802, and of the numbers vaccinated annually from the beginning of 1807 to the end of 1836.

| Years | Numbers vaccinated in the Maritime Districts | Kandian Provinces | Whole island |
|---|---|---|---|
| 1802-1806 | 54,958 | | |
| 1807 | 21,870 | | |
| 1808 | 26,207 | | |
| 1809 | 25,697 | | |
| 1810 | 35,076 | | |
| 1811 | 30,491 | | 278,003 |
| 1812 | 26,783 | | |
| 1813 | 20,509 | | |
| 1814 | 19,198 | | |
| 1815 | 17,214 | | |
| 1816 | 18,550 | 980 | 19,530 |
| 1817 | 17,185 | 6,279 | 23,464 |
| 1818 | 13,010 | 553 | 13,563 |
| 1819 | 48,411 | 14,249 | 62,660 |
| 1820 | 30,460 | 4,032 | 34,492 |
| 1821 | 16,929 | 1,867 | 18,796 |
| 1822 | 13,988 | 554 | 14,542 |
| 1823 | 12,810 | 4,925 | 17,735 |
| 1824 | 23,503 | 3,120 | 26,623 |
| 1825 | 25,970 | 1,454 | 27,424 |
| 1826 | 18,157 | 2,079 | 20,236 |
| 1827 | 14,828 | 1,907 | 16,735 |
| 1828 | 15,625 | 1,276 | 16,901 |
| 1829 | 36,167 | 1,848 | 38,015 |
| 1830 | 56,418 | 6,866 | 63,284 |
| 1831 | 35,992 | 6,188 | 42,180 |
| 1832 | 24,565 | 4,607 | 29,172 |
| 1833 | 22,209 | 2,347 | 24,556 |
| 1834 | 32,129 | 2,272 | 34,401 |
| 1835 | 22,653 | 1,666 | 24,319 |
| 1836 | 23,162 | 1,329 | 24,491 |
| Total | 800,724 | 70,398 | 871,122 |

J. K.